

RECEIVED
APR 12 2002

PATENT
Docket No. 4351-2000700

TECH CENTER 1800/2900

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner for Patents, Washington, D.C. 20231, on April 9, 2002.

Martina Placid
Martina Placid

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Zaoyuan PENG et al.

Serial No.: 10/032,106

Filing Date: December 21, 2001

For: METHODS FOR IDENTIFYING G-
PROTEIN COUPLED RECEPTORS
ASSOCIATED WITH DISEASES

Examiner: To Be Assigned

Group Art Unit: 1646

INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97 AND § 1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted:

- With the application; accordingly, no fee or separate requirements are required.
- Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required.
- After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
 - A fee is required. A check in the amount of * is enclosed.
 - A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
 - A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly; no fee is believed to be due.
- After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee.
 - A Certification under 37 C.F.R. § 1.97(e) is provided below and a check in the amount of is enclosed.
 - A Certification under 37 C.F.R. § 1.97(e) is provided below and a Fee Transmittal form (PTO/SB/17 is attached to this submission in duplicate.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

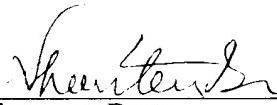
The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **433112000700**. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: April 9, 2002

Respectfully submitted,

By:


Shantanu Basu
Registration No. 43,318

Morrison & Foerster LLP
755 Page Mill Road
Palo Alto, California 94304-1018
Telephone: (650) 813-5995
Facsimile: (650) 494-0792



Form PTO-1449

INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

(use several sheets if necessary)

Docket Number 433112000700	Application Number 10/432,106
Applicant	Zaoyuan PENG et al.
Filing Date December 21, 2001	Group Art Unit 1646
Mailing Date April 9, 2002	

APR 15 2002

1600 2900

RECEIVED

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
	1.	09/25/1990	4,959,314	Mark et al.			
	2.	05/30/1995	5,419,966	Reed et al.			
	3.	11/28/1995	5,470,967	Huie et al.			
	4.	02/03/1998	5,714,331	Buchardt et al.			
	5.	06/23/1998	5,770,722	Lockhart et al.			
	6.	09/15/1998	5,807,522	Brown et al.			
	7.	11/03/1998	5,831,070	Pease et al.			
	8.	11/17/1998	5,837,832	Chee et al.			
	9.	07/06/1999	5,919,523	Sundberg et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
	10.	Acharya, S. and Karnik, S. S. (October 1996). "Modulation of GDP Release from Transducin by the Conserved Glu ¹³⁴ -Arg ¹³⁵ Sequence in Rhodopsin," <i>The J. Biol. Chem.</i> 271(41):25406-25411.
	11.	Alewijne, A.E. et al. (2000). "The Effect of Mutations in the DRY Motif on the Constitutive Activity and Structural Instability of the Histamine H ₂ Receptor," <i>Mol. Pharmacol.</i> 57:890-898.
	12.	Ausubel, et al. eds., (1987). <i>Current Protocols in Molecular Biology</i> . Greene Publishing Associates and Wiley-Interscience, total pages 7 (Table of Contents).
	13.	Baldwin, J. M. (1994). "Structure and Function of Receptors Coupled to G Proteins," <i>Curr. Opin. in Cell Biol.</i> 6:180-190.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

RECEIVED
U.S. PATENT AND TRADEMARK OFFICE
APR 15 2002
1600 2900

Form PTO-1449 INFORMATION DISCLOSURE CITATION FOR AN APPLICATION O I P E JUN 2002 172 1 2 2002 (Use several sheets if necessary)		Docket Number 433112000700 Applicant Zaoyuan PENG et al.	Application Number 10/032,106 Filing Date December 21, 2001 Mailing Date April 9, 2002																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">15.</td><td>Bourne, H.R. et al. (November 1990). "The GTPase Superfamily: A Conserved Switch for Diverse Cell Functions," <i>Nature</i> 348:125-132.</td></tr> <tr><td>16.</td><td>Burge, C. and Karlin, S. (April 1997). "Prediction of Complete Gene Structures in Human Genomic DNA," <i>J. Mol. Biol.</i> 268(1): 78-94.</td></tr> <tr><td>17.</td><td>Clarke, J. and Fersht, A.R. (1993). "Engineered Disulfide Bonds as Probes of the Folding Pathway of Barnase: Increasing the Stability of Proteins against the Rate of Denaturation," <i>Biochemistry</i> 32:4322-4329.</td></tr> <tr><td>18.</td><td>Coughlin, S.R. (1994). "Expanding Horizons for Receptors Coupled to G Proteins: Diversity and Disease," <i>Curr. Opin. in Cell Biol.</i> 6:191-197.</td></tr> <tr><td>19.</td><td>De Weerth, A. et al. (1993). "Guinea Pig Gallbladder and Pancreas Possess Identical CCK-A Receptor Subtypes: Receptor Cloning and Expression," <i>Am. J. Physiol.</i> 265(Gastrointest. Liver Physiol. 28):G1116-G1121.</td></tr> <tr><td>20.</td><td>Gō, M. and Miyazawa, S. (1980). "Relationship Between Mutability, Polarity and Exteriority of Amino Acid Residues in Protein Evolution," <i>Intl. J. Peptide Protein Res.</i> 15:211-224.</td></tr> <tr><td>21.</td><td>Haezebrouck, P. et al. (1993). "Stability Effects Associated with the Introduction of a Partial and a Complete Ca^{2+}-Binding Site into Human Lysozyme," <i>Protein Eng.</i> 6(6):643-649.</td></tr> <tr><td>22.</td><td>Hébert, T.E and Bouvier, M. (1998). "Structural and Functional Aspects of G Protein-Coupled Receptor Oligomerization," <i>Biochem. Cell Biol.</i> 76:1-11.</td></tr> <tr><td>23.</td><td>Hilgenfeld, R. (1995). "Regulatory GTPases," <i>Curr. Opin. in Struct. Biol.</i> 5:810-817.</td></tr> <tr><td>24.</td><td>Hoy, C.A. et al. (1993). "Bromodeoxyuridine/DNA Analysis of Replication in CHO Cells After Exposure to UV Light," <i>Mutation Research</i> 290:217-230.</td></tr> <tr><td>25.</td><td>Keown, W. A. et al. (1990). "Methods for Introducing DNA into Mammalian Cells," <i>Methods in Enzymology</i> 185:527-537.</td></tr> <tr><td>26.</td><td>Kerkhof, L. (1992). "A Comparison of Substrates for Quantifying the Signal from a Nonradiolabeled DNA Probe," <i>Anal. Biochem.</i> 205:359-364.</td></tr> <tr><td>27.</td><td>Kyte, J. and Doolittle, R. F. (1982). "A Simple Method for Displaying the Hydropathic Character of a Protein," <i>J. Mol. Biol.</i> 157:105-132.</td></tr> <tr><td>28.</td><td>Langer, P. R. et al. (November 1981). "Enzymatic Synthesis of Biotin-Labeled Polynucleotides: Novel Nucleic Acid Affinity Probes (Nucleotide Analog/DNA and RNA Polymerase/Avidin-Sepharose/Antibiotin Antibody/Immunoprecipitation)," <i>Proc. Natl. Acad. Sci.</i> 78(11):6633-6637.</td></tr> <tr><td>29.</td><td>Lou, L. et al. (January 1999). "Gene Expression Profiles of Laser-Captured Adjacent Neuronal Subtypes," <i>Nature Med.</i> 5(1):117-122.</td></tr> <tr><td></td><td>Masui, A. et al. (October 1994). "Stabilization and Rational Design of Serine Protease AprM Under Highly Alkaline and High-Temperature Conditions," <i>Appl. and Env. Microbiol.</i> 60(10):3579-3584.</td></tr> </table>				15.	Bourne, H.R. et al. (November 1990). "The GTPase Superfamily: A Conserved Switch for Diverse Cell Functions," <i>Nature</i> 348:125-132.	16.	Burge, C. and Karlin, S. (April 1997). "Prediction of Complete Gene Structures in Human Genomic DNA," <i>J. Mol. Biol.</i> 268(1): 78-94.	17.	Clarke, J. and Fersht, A.R. (1993). "Engineered Disulfide Bonds as Probes of the Folding Pathway of Barnase: Increasing the Stability of Proteins against the Rate of Denaturation," <i>Biochemistry</i> 32:4322-4329.	18.	Coughlin, S.R. (1994). "Expanding Horizons for Receptors Coupled to G Proteins: Diversity and Disease," <i>Curr. Opin. in Cell Biol.</i> 6:191-197.	19.	De Weerth, A. et al. (1993). "Guinea Pig Gallbladder and Pancreas Possess Identical CCK-A Receptor Subtypes: Receptor Cloning and Expression," <i>Am. J. Physiol.</i> 265(Gastrointest. Liver Physiol. 28):G1116-G1121.	20.	Gō, M. and Miyazawa, S. (1980). "Relationship Between Mutability, Polarity and Exteriority of Amino Acid Residues in Protein Evolution," <i>Intl. J. Peptide Protein Res.</i> 15:211-224.	21.	Haezebrouck, P. et al. (1993). "Stability Effects Associated with the Introduction of a Partial and a Complete Ca^{2+} -Binding Site into Human Lysozyme," <i>Protein Eng.</i> 6(6):643-649.	22.	Hébert, T.E and Bouvier, M. (1998). "Structural and Functional Aspects of G Protein-Coupled Receptor Oligomerization," <i>Biochem. Cell Biol.</i> 76:1-11.	23.	Hilgenfeld, R. (1995). "Regulatory GTPases," <i>Curr. Opin. in Struct. Biol.</i> 5:810-817.	24.	Hoy, C.A. et al. (1993). "Bromodeoxyuridine/DNA Analysis of Replication in CHO Cells After Exposure to UV Light," <i>Mutation Research</i> 290:217-230.	25.	Keown, W. A. et al. (1990). "Methods for Introducing DNA into Mammalian Cells," <i>Methods in Enzymology</i> 185:527-537.	26.	Kerkhof, L. (1992). "A Comparison of Substrates for Quantifying the Signal from a Nonradiolabeled DNA Probe," <i>Anal. Biochem.</i> 205:359-364.	27.	Kyte, J. and Doolittle, R. F. (1982). "A Simple Method for Displaying the Hydropathic Character of a Protein," <i>J. Mol. Biol.</i> 157:105-132.	28.	Langer, P. R. et al. (November 1981). "Enzymatic Synthesis of Biotin-Labeled Polynucleotides: Novel Nucleic Acid Affinity Probes (Nucleotide Analog/DNA and RNA Polymerase/Avidin-Sepharose/Antibiotin Antibody/Immunoprecipitation)," <i>Proc. Natl. Acad. Sci.</i> 78(11):6633-6637.	29.	Lou, L. et al. (January 1999). "Gene Expression Profiles of Laser-Captured Adjacent Neuronal Subtypes," <i>Nature Med.</i> 5(1):117-122.		Masui, A. et al. (October 1994). "Stabilization and Rational Design of Serine Protease AprM Under Highly Alkaline and High-Temperature Conditions," <i>Appl. and Env. Microbiol.</i> 60(10):3579-3584.
15.	Bourne, H.R. et al. (November 1990). "The GTPase Superfamily: A Conserved Switch for Diverse Cell Functions," <i>Nature</i> 348:125-132.																																		
16.	Burge, C. and Karlin, S. (April 1997). "Prediction of Complete Gene Structures in Human Genomic DNA," <i>J. Mol. Biol.</i> 268(1): 78-94.																																		
17.	Clarke, J. and Fersht, A.R. (1993). "Engineered Disulfide Bonds as Probes of the Folding Pathway of Barnase: Increasing the Stability of Proteins against the Rate of Denaturation," <i>Biochemistry</i> 32:4322-4329.																																		
18.	Coughlin, S.R. (1994). "Expanding Horizons for Receptors Coupled to G Proteins: Diversity and Disease," <i>Curr. Opin. in Cell Biol.</i> 6:191-197.																																		
19.	De Weerth, A. et al. (1993). "Guinea Pig Gallbladder and Pancreas Possess Identical CCK-A Receptor Subtypes: Receptor Cloning and Expression," <i>Am. J. Physiol.</i> 265(Gastrointest. Liver Physiol. 28):G1116-G1121.																																		
20.	Gō, M. and Miyazawa, S. (1980). "Relationship Between Mutability, Polarity and Exteriority of Amino Acid Residues in Protein Evolution," <i>Intl. J. Peptide Protein Res.</i> 15:211-224.																																		
21.	Haezebrouck, P. et al. (1993). "Stability Effects Associated with the Introduction of a Partial and a Complete Ca^{2+} -Binding Site into Human Lysozyme," <i>Protein Eng.</i> 6(6):643-649.																																		
22.	Hébert, T.E and Bouvier, M. (1998). "Structural and Functional Aspects of G Protein-Coupled Receptor Oligomerization," <i>Biochem. Cell Biol.</i> 76:1-11.																																		
23.	Hilgenfeld, R. (1995). "Regulatory GTPases," <i>Curr. Opin. in Struct. Biol.</i> 5:810-817.																																		
24.	Hoy, C.A. et al. (1993). "Bromodeoxyuridine/DNA Analysis of Replication in CHO Cells After Exposure to UV Light," <i>Mutation Research</i> 290:217-230.																																		
25.	Keown, W. A. et al. (1990). "Methods for Introducing DNA into Mammalian Cells," <i>Methods in Enzymology</i> 185:527-537.																																		
26.	Kerkhof, L. (1992). "A Comparison of Substrates for Quantifying the Signal from a Nonradiolabeled DNA Probe," <i>Anal. Biochem.</i> 205:359-364.																																		
27.	Kyte, J. and Doolittle, R. F. (1982). "A Simple Method for Displaying the Hydropathic Character of a Protein," <i>J. Mol. Biol.</i> 157:105-132.																																		
28.	Langer, P. R. et al. (November 1981). "Enzymatic Synthesis of Biotin-Labeled Polynucleotides: Novel Nucleic Acid Affinity Probes (Nucleotide Analog/DNA and RNA Polymerase/Avidin-Sepharose/Antibiotin Antibody/Immunoprecipitation)," <i>Proc. Natl. Acad. Sci.</i> 78(11):6633-6637.																																		
29.	Lou, L. et al. (January 1999). "Gene Expression Profiles of Laser-Captured Adjacent Neuronal Subtypes," <i>Nature Med.</i> 5(1):117-122.																																		
	Masui, A. et al. (October 1994). "Stabilization and Rational Design of Serine Protease AprM Under Highly Alkaline and High-Temperature Conditions," <i>Appl. and Env. Microbiol.</i> 60(10):3579-3584.																																		
EXAMINER:		DATE CONSIDERED:																																	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.																																			

Form PTO-1449

INFORMATION DISCLOSURE CITATION
FOR AN APPLICATION

APR 12 2002 (use several sheets if necessary)

Docket Number 433112000700	Application Number 10/032,106
Applicant	Zaoyuan PENG et al.
Filing Date December 21, 2001	Group Art Unit 1646
Mailing Date April 9, 2002	

30.	Nielsen, P. E. et al. (December 1991). "Sequence-Selective Recognition of DNA by Strand Displacement with a Thymine-Substituted Polyamide," <i>Science</i> 254:1497-1500.
31.	Nielsen, P. E. (1999). "Applications of Peptide Nucleic Acids," <i>Curr. Opin. Biotechnol.</i> 10:71-75.
32.	Olsen, O. and Thomsen, K. K. (1991). "Improvement of Bacterial β -Glucanase Thermostability by Glycosylation," <i>J. of Gen. Microbiol.</i> 137:579-585.
33.	Parma, J. et al. (October 1993). "Somatic Mutations in the Thyrotropin Receptor Gene Cause Hyperfunctioning Thyroid Adenomas," <i>Nature</i> 365:649-651.
34.	Querol, E. et al. (1996). "Analysis of Protein Conformational Characteristics Related to Thermostability," <i>Prot. Eng.</i> 9(3):265-271.
35.	Rocheville, M. et al. (April 2000). "Receptors for Dopamine and Somatostatin: Formation of Hetero-Oligomers with Enhanced Functional Activity," <i>Science</i> 288:154-157.
36.	Sambrook, J. et al. (1989). <u>Molecular Cloning: A Laboratory Manual</u> Cold Spring Harbor Laboratory Press pp. 16.17-16.22 and 16.32-16.40.
37.	Smith, T.F. and Waterman, M.S. (1981). "Comparison of Biosequences," <i>Adv. in Appl. Math.</i> 2:482-489.
38.	Sonnhammer, E.L.L. et al. (1997) "Pfam: A Comprehensive Database of Protein Domain Families Based on Seed Alignments," <i>PROTEINS: Structure, Functions, and Genetics</i> 28:405-420.
39.	Toma, S. et al. (1991). "Grafting of a Calcium-Binding Loop of Thermolysin to <i>Bacillus Subtilis</i> Neutral Protease," <i>Biochemistry</i> 30:97-106.
40.	Wakarchuk, W. W. et al. (1994). "Thermostabilization of the <i>Bacillus Circulans</i> Xylanase by the Introduction of Disulfide Bonds," <i>Protein Eng.</i> 7(11):1379-1386.
41.	Wansink, D.G. et al. (July 1993). "Fluorescent Labeling of Nascent RNA Reveals Transcription by RNA Polymerase II in Domains Scattered Throughout the Nucleus," <i>The J. of Cell Biology</i> 122(2):283-293.
42.	Watson, S. and Arkinstall, S. eds. (1994). "Cholecytokinin (CCK) and Gastrin" In <u>The G-Protein Linked Receptor FactsBook</u> Academic Press: Harcourt Brace & Company, Publishers. pp. 89-95 and 194-198.
43.	Weinberg, D. H. et al. (July 1996). "Cloning and Expression of a Novel Neuropeptide Y Receptor," <i>The J. of Biol. Chem.</i> 271(28):16435-16438.
44.	Yu, H. et al. (1994). "Cyanine Dye dUTP Analogs for Enzymatic Labeling of DNA Probes," <i>Nucleic Acids Res.</i> 22(15):3226-3232 .

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.